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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,568	10/09/2003	Daniel Buttry	33043/12567/US	6818

20686 7590 12/13/2005

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EXAMINER	
AFREMOVA, VERA	
ART UNIT	**PAPER NUMBER**
1651	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/681,568	BUTTRY ET AL.
	Examiner	**Art Unit**
	Vera Afremova	1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 July 2004*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-5* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *7/20/2004*.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-5 are pending and under examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,221,612 (Knapp et al.) or by US 5,582,982 (Cubbage et al.).

Claims are directed to a method for reducing background fluorescence comprising steps of labeling cells in a solution with a fluorescent agent that is permeant to the cells and contacting the solution with a chemical agent that modifies extracellular fluorescent agent, thus, reducing background fluorescent of the solution by at least 10%. Some claims are directed to an aqueous sample comprising cells labeled with the fluorescent agent and the chemical agent.

US 6,221,612 (Knapp et al.) discloses a method for reducing background fluorescence comprising step of loading cells suspended in a solution with a fluorescent probe that is a photon producing agent and step of adding to the solution a chemical agent (a photon reducing agent) that modifies the fluorescent probe by reducing photon (example 7, col. 35-36). The cited patent teaches that the background fluorescent is reduced (col. 35, lines 32-33 and col. 36, lines 36-39) and that the reading of the cell-based assays is improved at least by 200-300 % (col. 35, line 57).

US 5,582,982 (Cubbage et al.) discloses a method for reducing background fluorescence comprising step of labeling cells in a solution with fluorescein as a fluorescent agent that is permeant to the cells and contacting the solution with chemical agent or dye that modifies extracellular fluorescent agent, thus, reducing background fluorescent of the solution.

Thus, the cited patents disclose identical methods and aqueous samples and, therefore, anticipate the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5 rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,221,612 (Knapp et al.) and/or US 5,582,982 (Cubbage et al.) taken with Aldrich Catalogue (Aldrich Handbook of Fine Chemicals and Laboratory Equipment. 2000-2001, pages 28 and 121) and Kano et al. (Journal of Physical Chemistry, (1983), Vol. 87, No. 4, pages 566-569).

Claims are directed to a method for reducing background fluorescence comprising steps of labeling cells in a solution with a fluorescent agent that is permeant to the cells and contacting the solution with a chemical agent that modifies extracellular fluorescent agent, thus, reducing background fluorescent of the solution by at least 10%. Some claims are directed to an aqueous sample comprising cells labeled with the fluorescent agent and the chemical agent. Some claims are further drawn to the use of acid black 48 as a chemical agent that modifies extracellular fluorescent agent and, thus, reduces background fluorescent.

US 6,221,612 (Knapp et al.) and/or US 5,582,982 (Cubbage et al.) are relied upon as explained above for the disclosure of methods for reducing background fluorescence in the cell-based assays wherein chemical agents are used to modify extracellular fluorescent agent to reduce the background fluorescent.

US 6,221,612 (Knapp et al.) and US 5,582,982 (Cubbage et al.) are lacking particular teaching about the use of acid black 48 for reduction of background fluorescence.

However, US 5,582,982 (Cubbage et al.) suggests that dyes suitable for reduction of background fluorescence have polyaromatic moiety and amino group (col. 6, lines 61-65). The dye acid black 48 has polyaromatic moiety and amino group as shown on page 28 of Aldrich Catalogue.

US 6,221,612 teaches that the chemical agents suitable for reduction of background fluorescence include photon reducing compounds that have absorption spectrum overlapping with the absorption, excitation or emission spectrum of a fluorescent agent or a photon producing agent applied in the assays and that photon reducing agents quench photon-producing agents. The cited reference by Kano et al. teaches that anthraquinone compounds provide for fluorescence quenching (entire document including title) and the Aldrich Catalogue demonstrates that Acid black 48 is an anthraquinone compound (page 28 and 121) and, thus, could provide for fluorescence quenching.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to use chemical agent(s) such as acid black 48 with a reasonable expectation of success in reducing background fluorescence in the cell-based fluorescence assays because acid black 48 is an anthraquinone compound providing for fluorescence quenching and having chemical structures similar to chemical agents suitable for reduction of background fluorescence as adequately taught and/or suggested by the prior art for a generic fluorescent agent. Thus, the claimed invention as a whole was clearly *prima facie* obvious, especially in the absence of evidence to the contrary.

The claimed subject matter fails to patentably distinguish over the state art as represented be the cited references. Therefore, the claims are properly rejected under 35 USC § 103.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Afremova whose telephone number is (571) 272-0914. The examiner can normally be reached from Monday to Friday from 9.30 am to 6.00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached at (571) 272-0926.

The fax phone number for the TC 1600 where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 1600, telephone number is (571) 272-1600.

Vera Afremova

AU 1651

December 8, 2005

V. Afremova

VERA AFREMOVA

PRIMARY EXAMINER